INDEX TO SURGICAL PROGRESS.

GENERAL SURGERY.

I. **Traumatic Origin of Tumors.** By K. WURZ (Tübingen). In an analysis of 714 cases, embracing benign and malign growths, but nineteen could with more or less certainty be traced to an antecedent trauma. If the probable cases would also be considered, the percentage could be placed at five.

Most of the benign growths originated without any causal connection with the trauma. Mechanical insults played a noteworthy *rôle* in osteomas exclusively, of which no less than 40 per cent., in all probability, were traceable in every instance to a severe injury; yet even under these circumstances the underlying cause may have been an osteomyelitis, tubercular or syphilitic, or even an attenuated bacillary infection.

As for malignant growths, sarcoma due to trauma is represented by 7 per cent., whereas carcinoma figures with but 1 per cent., because the insults were never of a severe nature, and at the utmost merely slight external injuries. Therefore, statistically, an isolated traumatism as an etiological factor is only under consideration in osteomas, carcinomas, and sarcomas, and plays a conspicuous *rôle* exclusively in osteomas on the one hand, and sarcomas (of the organs of locomotion) on the other hand. These statistics offer a lower percentage than that of others, for the reason that only cases with a single insult to their credit are treated, and instances of repeated irritation and scar formation are viewed as foreign to the purpose of this statistic.—*Beiträge zur klinische Chirurgie*, Band xxvi, Heft 3.

II. Report of the Heidelberg Surgical Clinic for the Year 1898. In the Supplement to the twenty-sixth volume of the *Beiträge zur klinische Chirurgie* is contained a report for the year 1898 of the work of the Heidelberg Clinic, and though the statements are summary, yet the following data concerning innovations and mooted points are of decided interest.

Thus, in removal of lingual carcinoma the cautery is employed evidently to insure a more perfect asepsis. Among goitres, in ten instances, infiltration anæsthesia was employed; and it is emphasized that just in those cases where chloroform narcosis proved bad, infiltration anæsthesia was pre-eminently serviceable, and additional security of the intactness of the recurrens nerve could be insured by patient's conversing. It would seem from the oft-repeated reference that the ninth and tenth ribs were chosen in thoracotomy; that the teaching of Schede that even these collections of pus should be opened at most dependent points is receiving due attention. For benign obstructions of the stomach, von Hacker's method with the Murphy button was used to the exclusion of every other method, though in three instances a subsequent recurrence of stenosis at the site of the anastomosis necessitated an enteroplasty (Heinecke-Mickulicz). In malignant obstructions, von Hacker-Murphy was performed twenty-one times, with two deaths, due to no technical dereliction; one death due to marasmus, the other to collapse.

Wölfler's operation performed three times, always with greatest difficulty. Five pylorectomies were done with the button; two deaths, one due to leakage, the other to pneumonia. In contrast to all of this gastric work, the suture was relied on in most of the intestinal resections. It is evidently the practice to search for the appendix and resect it in all perityphlitic abscesses. Of eleven cases thus operated, two died. One having existed six weeks, died of pyæmia, the other six days, died of sepsis. In the herniotomies, Bassini's and Czerny's methods figure equally.

Out of thirty-eight cases operated for biliary disease, but six

died. These embrace in part twenty cholecystostomies with one death, choledochotomy four, cholecystectomy four, cholecystenterostomy without the button five times with two deaths. The remaining cases were exploratory. Among the five tubercular kidneys all were palpably large kidneys, and no cystoscope was used. In a single instance a papillomatous growth was removed with the aid of an operating cystoscope. Beck's operation for hypospadias was performed three times, but failed to remedy the deformity because of retraction of the mucous membrane, which brought the orifice near the under surface of the penis again. Bottini's method for enlarged prostate was very successful in two instances, and in two others a total failure. Among mammary carcinomas a noteworthy occurrence was the stretching of the brachial plexus for the relief of neuralgia in a case operated on six years before; no relief, though, was attained. A liberal use of iodoform injections into various joints was not fraught with any benefit, and in most instances had to be followed by incision for drainage of abscesses or still further extensive procedures.—*Beiträge zur klinische Chirurgie,* Band xxvi, Supplement.

MARTIN W. WARE (New York).

HEAD.

I. Trephining for Tumors of the Brain. By DR. REINHARD HASS (Heidelberg). Hass reports five cases of brain tumor operated upon by Czerny. These, together with two cases previously reported, show a mortality of 56 per cent., agreeing in this respect with the experiences of Chipault and Starr. An accurate diagnosis of tumor to the exclusion of any other intracranial lesion, its location, and its pathological nature are evermore essentials for a successful operation. In but two of the cases was choked disk present. Six times the tumor was located in the motor area, once in the cerebellum. As an index of the extent of the growth, reliance is placed on the relatively scant occurrence

of choked disk associated with growths of the motor area; conversely, a marked choked disk speaks for a large growth. More uncertain than the extent of the growth is its nature. Though but a small percentage of the growths is to be classed as operable, yet the osteoplastic resection of the skull (Wagner) has greatly enlarged the operative possibilities. Technically, Czerny uses the circular saw for the outer table, reserving the chisel merely for the inner table. The base of the bone flap is divided with the Gigli saw.—*Beiträge zur klinische Chirurgie,* Band xxv, Heft 3.

CHEST AND ABDOMEN.

I. Operations for Carcinoma of the Breast. Heidelberg Clinic, 1887-1897. By DR. FR. MAHLER (Heidelberg). This contribution is intended to afford an insight as to what has been the ultimate gain since asepsis has replaced antisepsis, supplemented by the more radical procedure of removal of portions of the pectoralis major as applied to 161 cases of mammary carcinoma. Eleven cases were passed as inoperable; of the remaining 150, two died in consequence of the operation, ninety-three of recurrences, one living with recurrence, thirty-four living and cured or died of intercurrent disease, and twenty unheard of.

Heidenhain's operation was the extent of the radical procedure, as it seemed of questionable moment whether the prognosis could be materially bettered by a more extensive, in a measure, mutilating operation. In fifty-four cases recurrence was substantiated, of which the time of their appearance is given in thirty-four instances. Ten times after two months, twenty times after seven months, and twenty-five within one year and six months. These fifty-four certain recurrences with seventeen doubtful ones, a total of seventy-one out of 150 cases on the other hand, raise the question of the advisability of a more radical procedure. As a result of the operation, but twenty-eight cases (21 per cent.) lived three years; eighteen times the glands were removed, and in ten instances they were not involved. This 21

per cent. of "*arbitrary three-year limit cures*" is an increase of 3 per cent. as compared with the results of previous years, but may be purely accidental. Author would advance the limit of cure to five years, since two of his cases lived to this time free from recurrence. If—judged by this standard—cases operated on up to 1894 be considered, seventeen cases lived beyond five years (14 per cent.). But this figure even includes a small number, three (5 per cent.), operated a second time. By far the greatest frequency of the recurrences was at the site of the scar, wherefore the author concludes a better result may be offered by more extensive operations at the expense of a possible functional disturbance.—*Beiträge zur klinische Chirurgie,* Band xxvi, Heft 3.

II. Surgical Treatment of Colitis. By DR. H. LINDNER (Berlin). By the treatment instituted in the two cases herein narrated, it is once more evident that the therapy of medicine tends to accuracy in the degree that it is surgical. The first case concerned a male, twenty-three years of age, afflicted with chronic ulcerative colitis, the ulcers even extending into the rectum. Because of the intense pains and tenesmus and wasting, posterior proctotomy was performed, but without benefit, leaving the patient incontinent. To place the rectum at rest, colostomy (Maydl) was performed at the colon ascendens; but the artificial anus so preyed on the patient's mind that suicidal intent necessitated restitution of the intestinal canal three months later, just at a critical moment, when a longer persistence of the intestinal fistula would have secured the end sought.

The second patient was a female, aged forty-nine years, hysterical in a high degree; multipara. For the relief of prolonged and persisting abdominal pain, the patient had performed on her, at intervals during five years, herniotomy, nephrorrhaphy, vaginal hysterectomy, and a laparotomy for adhesions. Her neurasthenic condition was ascribed by Kutner to malnutrition due

establish their value, define the limits of their application, or determine their worthlessness.

To what extent the spinal meninges are susceptible to the ordinary micro-organisms which are likely to be carried into the canal, and what risks in this respect the patient runs beyond what ordinary surgical preliminary care can provide against, has not yet been determined. It is not to be supposed that the spinal meninges are fool-proof, any more than are the peritoneum or the cavities of joints. While it is true that the man who is fit to do operative surgery at all is fit to practise this procedure, on the other hand it is to be hoped that those who do but little surgery, and that of an emergency character, will realize their shortcomings in respect to the asepsis required for this method of insuring to the patient a painless operation, and employ one or another of the general anæsthetics. The occurrence of suppuration following the infliction of an operation wound is not incompatible with final recovery, even in cases of abdominal section or arthrotomy; but the patient who develops an infective meningitis as the result of a spinal puncture with a dirty needle is absolutely and positively doomed, nor can the surgeon who is responsible for his condition lift his hand to aid him.

While, therefore, it is highly proper that the skilled and careful operator whose daily work is one of aseptic details, the carrying out of which have become second nature to him, should gather experience and knowledge concerning, and help the world to reap the benefit of whatever is of value in the new method, it is only fair that a note of warning should be sounded for the benefit of those who, little realizing what may happen, may, in the absence of such warning, sacrifice human lives and place in jeopardy a discovery that may yet prove to be an almost inestimable boon to humanity.

In all the articles which have appeared upon the subject there has been a noteworthy absence of any attempt to explain the precise manner in which the cocaine acts upon the sensory

chus, formed as usual with the confluence of the hepatic and cystic ducts. The interior of this strand is not lined with epithelium. The arteries supplying this segment of the bowel are hypertrophied, in marked contrast to the poorly developed superior mesenteric artery, and the absence of its branch, the pancreatico-duodenalis inferior. This latter finding, together with absence of inflammation or torsion of the bowel, puts it in the foremost rank as a causative factor. This angiogenesis the author regards as a prime factor in many other congenital anomalies.

Diagnosis can only be one of intestinal obstruction, presumptive of its situation in the degree that the meteorism varies after emesis, and as to the quantity of meconium passed and the character of vomitus.

Operation.—As any resection or anastomosis would sacrifice the duodenal papilla, gastro-enterostomy is the only rational procedure.—*Beiträge zur klinische Chirurgie*, Band xxvi, Heft 3.

MARTIN W. WARE (New York).

BONES AND JOINTS.

I. Tuberculosis of the Bones and Joints of the Foot. By DR. O. HAHN (Breslau). This *résumé* of 704 cases, without offering anything distinctively new, substantiates the hitherto accepted teachings. Tuberculosis of the foot is the same as that of any other tuberculosis in any of the other bones of the body, particularly as to its distribution according to sex, among whom the males figure with 62 per cent., in its preference for the period of puberty, its dependence on heredity, and its relation to occupation and social status of the individual (laboring class). It ensued in 13 per cent. of the cases after a trauma in individuals affected or not with tuberculosis. The lapse of time between trauma and the appearance of the tuberculosis amounted to one or more months. No distinctive feature was indicative of the

early recognition of the transition from post-traumatic effects to tuberculosis.

The site of the tuberculosis diminishes directly in proportion to the distance of the bones and joints from the ankle-joint. The statical bearing of the bones is no factor in determining the localization of the tuberculosis, but, on the contrary, the quantity of cancellous tissue in each bone; hence the following order of frequency, os calcis, astragalus, cuboid scaphoid, etc. Again, the focus in each of these bones is in proportion to the prevalence of the greatest amount of cancellous tissue; and, finally, the same holds good for the situation of the fistulous tract in the bone. The ankle-joint was most frequently invaded, and Chopart's and Lisfranc's next in order; 31 per cent. were primary synovial tuberculosis, and 69 per cent. the focus was osseal. As a conservative treatment, iodoform oil injection proved a sovereign remedy; as partially conservative, the 126 atypical resections may be viewed. The more radical operations comprise resection of the ankle, fifty-three times; exarticulation, Lisfranc, three; according to Chopart, four; subastragaloid, Malgaigne, five; Mikulicz, one. Amputations: Symes twenty-six, Pirogoff forty-one, Von Bruns, tibiocalcaneal resection twenty-six, twenty-nine amputations of the leg and two of the thigh. Of late, all the amputations were performed according to Von Bruns's subperiosteal method.

A large number of these data are of no particular value at this recent day because they date back to pre-antiseptic days, and only serve to emphasize the advancement nowadays. Particularly does this obtain in regard to the large number of amputations performed because of the suppuration supervening after tolerably simple operative procedures.—*Beiträge zur klinische Chirurgie,* Band xxvi, Heft 2.

MARTIN W. WARE (New York).

RECTUM AND ANUS.

1. **The Treatment of Rectal Carcinoma at the Rostock Clinic.** By DR. F. SCHNEIDER (Rostock). This review of 115 cases treated at Rostock during the period of 1883-1899 purposes in the main to show the gain secured by the sacral methods introduced by Kraske in 1887, and thus to offset the adverse contention of English and French surgeons. Sixty-six males and forty-nine females made up the list of the afflicted, the average age being fifty-nine for the former, fifty-five for the latter. Four cases are recorded during the juvenile period, viz., aged fourteen, fifteen, seventeen, seventeen, and all were examples of cylindrical carcinomata, and their fate that of adults with like carcinomata.

Etiologically, hæmorrhage and prolapse were found responsible factors in the greater number of instances. There were no distinctive rectal signs peculiar to carcinomata, as in most instances digital examination alone cleared up the situation.

Operation.—Whereas Kraske's operation has enlarged the field and scope of operative interference, it has in no measure replaced the older procedures, which are applicable to less extensive carcinomata, and are therefore not competitors with Kraske's method. Concurrent with the latter are Kocher's and Schlange's osteoplastic methods. Against the latter it is held that it offers too small a space, and leaves too many pockets, which favor wound infections. Other procedures, like Rehn's vaginal route or the abdominoperineal route of Quenu and Hartmann, were not practised. The indication set down for Kocher's method is a growth beginning just above the anus, and whose upper limit can still be palpated, no adherence to the sacrum, and a tumor that can be drawn down. Kraske was reserved for growths so extensive as not to permit of the introduction of the finger into the lumen of the bowel in order to palpate the upper limit of the growth, and where extensive adhesions existed with the sacrum. The performance of methods without bone resection is limited to growths situated no higher than eight to ten centimetres, which

must not be circular nor adherent, nor must there be any metastases in the sacral glands. As inoperable are to be regarded cases where the bladder or uterus is invaded, or where infiltrations are extensive or flat, and where there are metastases of the internal organs. Between these two latter extremes lies the medium for bone resection methods, which embrace by far the majority of operations. The restoration of the rectal canal was favored by end-to-end suture of the segments, provided the proximal stump was freely movable, and enough of the anal stump was preserved; and be it here stated, that only in exceptional instances could the peritoneal reflection be spared. To ensure accurate adaptation, supplementary sutures were passed through perirectal tissues. This method was practised in seven out of seventeen cases with success. Where the distal segment was small and the proximal freely movable, invagination of the latter into the former was done: this was executed thirty-one times successfully. Artificial sacral anus was made seven times, and three times according to the torsion method of Gersuny, and only in one instance, according to the latter method, was continence obtained.

A summary of the results is as follows: Cases operated without bone resection twenty, of which thirteen died after one year and ten months; two died as direct result of the operation; three times was continence obtained. Seven survived three years, and of these two even lived beyond nine years. With bone resection according to Kocher's method, twelve cases were operated, four died from complications associated with the operation; of the surviving eight only one lived three and another six years. In no instance was continence obtained. Operated by Kraske's method are seventeen cases; thirteen survived the operation, four died from complications intimately dependent on the operation, seven died after one year; five are living after one year. Kraske's personal experience in the first ten cases offered a mortality of 40 per cent.; later on, with extensive experience in fifty-one cases, this mortality was reduced to 9.8 per cent.

According to Schlange's temporary bone resection four cases were operated on, with no deaths from the operation; only one patient lived three years thereafter. The thirty-two cases of colostomy had an average life of eight months. Twenty-eight cases treated palliatively lived thirteen months.

In conclusion, it is stated that of the thirty-one cases treated with bone resection methods 45 per cent. died in one year, 58 per cent. in two years, and the operation mortality was 23 per cent. Notwithstanding this high death-rate, the author expresses his belief that with the dexterity pursuant to a larger experience these figures can be reduced as Kraske himself has shown, so that the field for the only operative procedure which accomplishes a radical extirpation of the neoplasm can be greatly extended.—*Beiträge zur klinische Chirurgie,* Band xxvi, Heft 2.

II. The Removal of Movable Rectal Carcinoma by Invagination and Ligature. By DR. M. RHEINWALD (Stuttgart). In view of the high mortality of the various sacral methods, averaging 18 per cent. with but 15 per cent. cures to their credit, and only in 15 per cent. of the cases accomplishing absolute continence, Professor Steinthal has conceived a method directed to minimize these advantages.

As movable carcinomas only ought to be radically removed, the growth is made to prolapse by traction upon it. Into the invaginated section of the bowel a corrugated tube is inserted to prevent its slipping, and an elastic ligature applied in healthy areas towards the anal side of the bowel. The growth is then allowed to separate by sloughing. Three times this was performed: in one instance, the prolapsed tumor was excised and sutured. The other two cases were treated typically. In all instances absolute continence was maintained in spite of the necessity to split the sphincter posteriorly in order to bring the growth into view. Of two of the cases it is narrated that no recurrence set in after two and a half and four years respectively. Additional advantages claimed are short narcosis, slight

loss of blood, no danger of disseminating the cancer cells. One decided drawback seems to be the danger of including a loop of bowel which may have slipped into the prolapsed bowel. Heuck, of Heidelberg, narrates a similar method of operating applicable only in exceptional instances. Likewise Trendelenburg advises preliminary laparotomy, division of the mesorectum, and then invagination. With the aid of these modifications, the author bespeaks a more extended application for this invagination method which speedily, bloodlessly, and safely accomplishes a good result(?).—*Beiträge zur klinische Chirurgie,* Band xxv, Heft 3.

MARTIN W. WARE (New York).